What Is Claimed Is:

1   1.   An arrangement for processing external-services data for use in a user facility,

2   the arrangement comprising:

3   an audio, video, and data signal bussing arrangement adapted to distribute audio,

4   video, and data to designated points in the user facility;

5   a plurality of appliances communicatively coupled to the bussing arrangement,

6   wherein the plurality of appliances are adapted to process at least one of: audio, video,

7   and data signals;

8   a network interface unit (NIU) adapted to communicatively couple the external

9   services data over the bussing arrangement and with the plurality of appliances in the

10   user facility; and

11   a user input device adapted to command the NIU to process the external-services

12   data for use at a particular one of the plurality of appliances in the user facility.

1   2.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the user input device includes one of the plurality of

3   appliances.

1   3.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the plurality of appliances includes at least one of: a TV,

3   a phone, a computer, a printer, a videophone, a videocassette recorder, an analog

4   recorder, a digital recorder, a stereo, a camera, a wireless phone, an intercom, an audio

5   speaker, and a pager.

1   4.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the user input device includes at least one of: a TV, a

3   phone, a computer, a videophone, a videocassette recorder, a wireless phone, an audio

4   speaker, a pager, a remote control, a modem, a voice recognition system, an Internet

5   access device, a keypad, and a touch screen.

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1   5.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the bussing arrangement includes at least one of: a

3   coaxial cable, a telephony line, a T1 line, an ISDN line, a DSL line, an infrared

4   transmitter, a wireless transmitter, a telephone modem, a wireless modem, a cable

5   modem, a broadband modem, and a computer network.

1   6.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the user input device includes a television remote adapted

3   to select NIU commands from a display generated by the NIU and displayed on the

4   television.

1   7.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the user input device includes a telephone adapted to

3   select NIU commands from a command menu programmed into the NIU.

1   8.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the NIU is further adapted to configure the external

3   services data for use at a particular one of the plurality of appliances.

1   9.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 8, wherein the external services data includes audio and video data,

3   and wherein the NIU is adapted to configure the audio data for use at an audio appliance

4   and to configure the video data for use at a video appliance.

1   10.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, further comprising a data memory circuit coupled to the NIU and

3   adapted to store data.

1   11.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 10, wherein the NIU is adapted to store incoming external services

3   data until a routing command is received from the user input device.

1   12.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 11, wherein the user input device is adapted to communicate with the

3   NIU and determine the type of data that is stored.

1   13.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 12, wherein the user input device is adapted to determine the source

3   of the data.

1   14.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 10, wherein the NIU is adapted to store configuration information in

3   the data memory circuit, wherein the configuration information includes routing

4   information for external services data.

1   15.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the external-services data includes data having a first data

3   form, and wherein the NIU is adapted to convert the external services data into a second

4   data form for use by a particular one of the plurality of appliances.

1   16.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 15, wherein the first data form includes packet-based data, and

3   wherein the second data form includes non-packet-based data.

1   17.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 15, wherein the first data form includes word processing data, and

3   wherein the second data form includes audio data.

1   18.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 17, wherein the first data form includes an email message, and

3   wherein the NIU is adapted to read and convert the email into an audio message.

1   19.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 15, wherein the first data form includes audio data, and wherein the

3   second data form includes word processing data.

1   20.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the user input device is further adapted to include a

3   security code, and wherein the NIU is further adapted to respond only to commands

4   having the security code.

1   21.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the plurality of appliances include a TV, and wherein

3   NIU is adapted to display the configuration of the plurality of appliances on the TV

4   screen.

1   22.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 21, and wherein the configuration data includes telephone data

3   including at least one of: the telephone number assigned to the phone, call waiting

4   options, caller ID options, answering options, forwarding options, message storage

5   options, call blocking options, and call screening options.

1   23.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 21, wherein the user input device is adapted to command the NIU

3   based upon the configuration display on the TV screen.

1   24.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 11, wherein one of the plurality of appliances includes a display, and

3   wherein the NIU is adapted to display the stored incoming external services data on the

4   display.

1   25.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 24, wherein the user input device is adapted to command the NIU

3   based upon the displayed incoming external services data.

1   26.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 25, wherein the NIU is adapted to display email, audio messages,

3   and video messages, and wherein the user input device is adapted to respond to an input

4   corresponding to the displayed information and to command the NIU to route the

5   displayed information to a particular one of the plurality of appliances.

1   27.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 11, further comprising a local data memory circuit coupled to the

3   NIU, wherein the data is stored in the local data memory circuit.

1   28.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 11, wherein the data is stored at a location external from the NIU.

1   29.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the NIU includes a processor adapted to function as an

3   answering machine for incoming telephony calls.

1   30.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the user input device is coupled to the bussing

3   arrangement and uses the bussing arrangement to command the NIU.

1   31.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 30, wherein the NIU is adapted to receive configuration information

3   in the form of DTMF tones, wherein the bussing arrangement includes a two-wire

4   analog system, and wherein the user input device is adapted to send control signals to

5   the NIU including DTMF tones.

1   32.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the user input device is adapted to send control signals to

3   the NIU that are configured to enable the control of external-data services including at

4   least one of: caller ID information, address book information, pay-per-view access

5   information, downloadable multimedia information, dynamically allocable telephone

6   numbers, call forwarding, message on hold, directory assistance, and household systems

7   control information.

1   33.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the NIU includes a printed circuit board (PCB) having at

3   least one general processor and at least one specific processor adapted to process video

4   data.

1   34.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 33, wherein the PCB includes a RISC processor.

1   35.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 33, wherein the PCB includes a DSP processor.

1   36.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein each of the plurality of appliances is adapted to deliver

3   status information signals to the NIU including the status of the appliance sending the

4   signal, further comprising a user interface device adapted to access and provide the

5   status information to a user.

1   37.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, wherein the plurality of appliances includes a microphone adapted

3   for use in an intercom system.

1   38.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 37, further comprising a monitoring device coupled and adapted to

3   receive audio signals from the microphone and, responsive to detecting an audio signal

4   above a threshold level, send an alert signal to a user via the NIU.

1   39.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 38, wherein the microphone is located near an infant, and the system

3   is used to monitor the infant.

1   40.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 39, wherein the alert includes a page signal.

1   41.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 38, wherein the microphone is adapted to monitor noise for security

3   monitoring.

1   42.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 1, further comprising an appliance interface device coupled to an

3   appliance and to the bussing arrangement and adapted to receive a first type of signal

4   and convert the data signal to a second type of data signal.

1   43.   An arrangement for processing external-services data for use in a user facility,

2   according to claim 42, wherein the appliance interface device is further adapted to

3   receive a signal via a first type of communications line and to transmit the signal via a

4   second type of communications line.

1　44.　An arrangement for processing external-services data for use in a user facility,

2　according to claim 42, wherein the appliance interface device is programmable via a

3　user input.

1　45.　An arrangement for processing external-services data for use in a user facility,

2　according to claim 42, wherein the appliance interface device is programmable by an

3　external-services provider via the NIU.

1　46.　A network interface system for interfacing different types of communication

2　systems including a first user-based communication system and a packet-based

3　communication system, comprising:

4　　　a data memory circuit adapted to store configuration data;

5　　　a user communication device;

6　　　a processor arrangement adapted to write configuration data into and read

7　configuration data from the memory circuit and to provide data for presenting

8　configuration information for accessing at the user communication device, further

9　adapted to process data received from, and exchange processed data between, the first

10　user-based communication system and the packet-based communication system, and, in

11　response to the configuration data, also adapted to route selected information provided

12　by the packet-based communication system to selected channels of the first user-based

13　communication system;

14　　　user input means for inputting configuration-defining control signals, wherein

15　the processor arrangement responds to the configuration-defining control signals by

16　changing the configuration data in the memory circuit and by rerouting selected

17　information provided by the packet-based communication system to selected channels

18　of the first user-based communication system according to the configuration-defining

19　control signals.

1　47.　A network interface system, according to claim 46, further comprising a network

2　system coupled to the first user-based communications system.

1   48.   A network interface system, according to claim 46, wherein the user input means

2   includes at least one of: an IR key panel , a wall-mount unit for the system, a TV, a

3   telephone, a computer, a videophone, a videocassette recorder, a wireless phone, a

4   remote control, a modem, a voice recognition system, an Internet access device, a

5   keypad, and a touch screen.

1   49.   A network interface system, according to claim 46, wherein the processor

2   arrangement is further adapted to write configuration data into the memory circuit in

3   response to signals received from the packet-based communication system

1   50.   A network interface system, according to claim 46, wherein the processor

2   arrangement is further adapted to permit reconfiguration in response to a user-provided

3   security code.

1   51.   A network interface system, according to claim 46, wherein the user

2   communication device includes at least one of: a TV monitor, a printer, and computer.

1   52.   A network interface system, according to claim 46, wherein the user

2   communication device includes a voice generating unit adapted to produce prerecorded

3   messages.

1   53.   A network interface system, according to claim 46, wherein the user input means

2   includes a computer adapted to communicate on the Internet.

1   54.   A network interface system, according to claim 46, wherein the packet-based

2   communication system includes at least one of: a cable modem, a wireless modem, a

3   broadband modem, a telephone modem, a DSL, a T1 line, and a computer network.

1 55. A network interface system for interfacing different types of communication

2 systems including a first user-based communication system and a packet-based

3 communication system, comprising:

4   a data memory circuit adapted to store data;

5   a user communication device;

6   a processor arrangement adapted to write data-intercept select data into and read

7 data-intercept select data from the memory circuit and to provide data for

8 communicating with a user via the communication device, further adapted to process

9 data received from, and exchange processed data between, the first user-based

10 communication system and the packet-based communication system, and, in response to

11 the data in the data memory circuit, also adapted to intercept information from the

12 packet-based communication system and to store the intercepted information in the data

13 memory circuit;

14   user means for inputting message-retrieval control signals, wherein the processor

15 arrangement responds to the message-retrieval control signals by displaying messages

16 (email, voice mail, etc.) from the data memory circuit.

1 56. A network interface system, according to claim 55, wherein the user input means

2 is at least one of: an IR key panel , a wall-mount unit for the system, a TV, a telephone,

3 a computer, a videophone, a videocassette recorder, a wireless phone, a remote control,

4 a modem, a voice recognition system, an Internet access device, a keypad, and a touch

5 screen.

1 57. A network interface system, according to claim 55, wherein the processor

2 arrangement is further adapted to write data-intercept select data into the memory circuit

3 in response to signals received from the packet-based communication system

1 58. A network interface system, according to claim 55, wherein the processor

2 arrangement is further adapted to write data-intercept select data into the memory circuit

3 in response to signals received from the input means.

1   59.   A network interface system, according to claim 55, wherein the user

2   communication device includes a TV monitor.

1   60.   A network interface system, according to claim 55, wherein the user

2   communication device includes a voice generating unit adapted to produce prerecorded

3   messages.

1   61.   A network interface system, according to claim 60, wherein the voice generating

2   unit audibly produces the prerecorded messages over the user communication device.

1   62.   A network interface system, according to claim 61, wherein the user

2   communication device is communicating a first audio signal, and wherein the

3   prerecorded messages are audibly produced at a sound level over that of the first audio

4   signal.

1   63.   A network interface system, according to claim 55, wherein the user

2   communication device includes a computer adapted to communicate on the Internet.

1   64.   A network interface system, according to claim 55, wherein the packet-based

2   communication system includes at least one of: a cable modem, a wireless modem, a

3   broadband modem, a telephone modem, a DSL, a T1 line, and a computer network.

1   65.   A method for controlling communications data in a communications system

2   having a NIU, a user interface device, a plurality of communications appliances, and a

3   bussing system, the method comprising:

4   using the user interface device and programming the NIU with configuration

5   information for external-services data;

6   receiving external-services data at the NIU;

7   responsive to the configuration information, configuring the received external-

8   services data and transferring the configured data via the bussing arrangement to one of

9   the communications appliances; and

10   receiving the transferred external-services data at the one communications

11   appliance.

1   66.   The method of claim 65, wherein programming the data receiving unit with

2   configuration information includes programming routing information for routing the

3   external-services data to particular ones of a plurality of communications devices.

1   67.   The method of claim 66, wherein the particular ones of a plurality of

2   communications devices include a telephony device, and wherein the routing data

3   includes the assignment of a particular telephone number to the telephony device.

1   68.   The method of claim 66, wherein the particular ones of a plurality of

2   communications devices include an Internet device, and wherein the routing data

3   includes the assignment of a particular Internet protocol address to the Internet device.

1   69.   The method of claim 66, wherein the particular ones of a plurality of

2   communications devices include a TV, and wherein the routing data includes the

3   assignment of a particular television subscription package to the TV.

1   70.   The method of claim 65, wherein using the user interface device and

2   programming the NIU with configuration information for external-services data

3   includes programming from an external-services provider location, wherein the

4   configuration information controls the type of external services that the NIU passes to

5   the plurality of communications devices.

1   71.   The method of claim 70, wherein the external-services data includes television

2   data, and wherein the external-services provider location programs the NIU with a

3   television subscription package.

1   72.   The method of claim 71, wherein the television subscription package includes a

2   specified number of television sets that can use the television data.

1   73.   The method of claim 71, wherein the television subscription package includes a

2   pay-per-view event.

1   74.   The method of claim 70, wherein the external-services data includes packet-

2   based data, and wherein the external-services provider location programs the NIU with a

3   packet-based access package.

1   75.   The method of claim 70, wherein the external-services data includes telephony-

2   based data, and wherein the external-services provider location programs the NIU with a

3   telephony-based access package.